

§ 121.355

also include an approved terrain situational awareness display.

(b) *Airplanes manufactured on or before March 29, 2002.* No person may operate a turbine-powered airplane after March 29, 2005, unless that airplane is equipped with an approved terrain awareness and warning system that meets the requirements for Class A equipment in Technical Standard Order (TSO)-C151. The airplane must also include an approved terrain situational awareness display.

(Approved by the Office of Management and Budget under control number 2120-0631)

(c) *Airplane Flight Manual.* The Airplane Flight Manual shall contain appropriate procedures for—

(1) The use of the terrain awareness and warning system; and

(2) Proper flight crew reaction in response to the terrain awareness and warning system audio and visual warnings.

[Doc. No. 29312, 65 FR 16755, Mar. 29, 2000]

EFFECTIVE DATE NOTE: At 65 FR 16755, Mar. 29, 2000, § 121.354 was added, effective Mar. 29, 2000.

§ 121.355 Equipment for operations on which specialized means of navigation are used.

(a) No certificate holder may conduct an operation—

(1) Using Doppler Radar or an Inertial Navigation System outside the 48 contiguous States and the District of Columbia, unless such systems have been approved in accordance with appendix G to this part; or

(2) Using Doppler Radar or an Inertial Navigation System within the 48 contiguous States and the District of Columbia, or any other specialized means of navigation, unless it shows that an adequate airborne system is provided for the specialized navigation authorized for the particular operation.

(b) Notwithstanding paragraph (a) of this section, Doppler Radar and Inertial Navigation Systems, and the training programs, maintenance programs, relevant operations manual material, and minimum equipment lists prepared in accordance therewith, approved before April 29, 1972, are not required to

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be approved in accordance with that paragraph.

[Doc. No. 10204, 37 FR 6464, Mar. 30, 1972]

§ 121.356 Traffic Alert and Collision Avoidance System.

(a) Unless otherwise authorized by the Administrator, each certificate holder operating a large airplane that has a passenger seating configuration, excluding any pilot seat, of more than 30 seats, shall equip its airplanes with an approved TCAS II traffic alert and collision avoidance system and the appropriate class of Mode S transponder according to the following schedule:

| Date | Required equipage |
|-------------------------|--|
| December 30, 1990 | At least 20% of all covered airplanes, if the certificate holder operates more than 30 such airplanes. |
| December 30, 1991 | 50% of all covered airplanes. |
| December 30, 1993 | 100% of all covered airplanes. |

(b) Unless otherwise authorized by the Administrator, after December 31, 1995, no person may operate a passenger or combination cargo/passenger (combi) airplane that has a passenger seat configuration, excluding any pilot seat, of 10 to 30 seats unless it is equipped with an approved traffic alert and collision avoidance system. If a TCAS II system is installed, it must be capable of coordinating with TCAS units that meet TSO C-119.

(c) The appropriate manuals required by § 121.131 shall contain the following information on the TCAS II System or TCAS I System, as appropriate, as required by this section:

(1) Appropriate procedures for—

(i) The operation of the equipment; and

(ii) Proper flightcrew action with respect to the equipment.

(2) An outline of all input sources that must be operative for the TCAS to function properly.

[Doc. No. 25355, 54 FR 951, Jan. 10, 1989, as amended by Amdt. 121-217, 55 FR 13247, Apr. 9, 1990; Amdt. 121-246, 59 FR 67586, Dec. 29, 1994; Amdt. 121-247, 60 FR 3303, Jan. 13, 1995; Amdt. 121-251, 60 FR 65932, Dec. 20, 1995]

§ 121.357 Airborne weather radar equipment requirements.

(a) No person may operate any transport category airplane (except C-46